

Standard Search 10/627,945

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What is claimed is:

1. A method for forming bleached crosslinked cellulosic fibers comprising the steps of:
 - applying an effective amount of a crosslinking agent in the presence of an
 - 5 effective amount of a polyol to a mat of cellulosic fibers,
 - separating the mat into substantially individualized fibers,
 - drying the treated individualized fibers,
 - curing the crosslinking agent in the presence of a polyol to form individualized
 - intrafiber crosslinked cellulosic fibers,
 - 10 treating said crosslinked cellulosic fibers with a bleaching agent.
2. The method of Claim 1, wherein the crosslinking agent is an α -hydroxypolycarboxlic acid.
3. The method of Claim 2, wherein the crosslinking agent is selected from the group
 - 15 consisting of malic acid, tartaric acid, citric acid, tartronic acid, α -hydroxyglutaric acid, and citramalic acid and mixtures thereof.
4. The method of Claim 3, wherein the crosslinking agent is citric acid.
5. The method of Claim 3, wherein the crosslinking agent is malic acid.
6. The method of Claim 1, wherein the polyol is selected from the group
 - 20 consisting of acyclic polyols, alicyclic polyols and heterosides and mixtures thereof.
7. The method of Claim 6, wherein the acyclic polyol is selected from the group consisting of erythritol, xylitol, arabitol, ribitol, sorbitol, mannitol, perseitol, and volemitol and mixtures thereof.
8. The method of Claim 7, wherein the acyclic polyol is sorbitol.
- 25 9. The method of Claim 6, wherein the alicyclic polyol is myo-Inositol.
10. The method of Claim 6, wherein the heteroside is selected from the group of isomalt, lactitol, and maltitol and mixtures thereof.
11. The method of Claim 10, wherein the heteroside is maltitol.
12. The method of claim 10, wherein the heteroside is lactitol.

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13. The method of Claim 1, wherein the polyol is applied to the cellulose mat before the application of the crosslinking agent.

14. The method of Claim 1, wherein the polyol is applied to the crosslink treated individualized fibers before curing.

5 15. The method of Claim 1, wherein the bleaching agent comprises hydrogen peroxide.

16. The method of Claim 15, wherein the hydrogen peroxide is applied to the fibers in an amount from about 0.2 kg /ADMT fiber to about 3 kg./ADMT fiber.

17. The method of Claim 15, further comprising sodium hydroxide.

10 18. The method of Claim 17, wherein the sodium hydroxide is applied in an amount of from about 0.7 kg./ADMT fiber to about 1.5 kg./ADMT fiber.

0.2 kg /ADMT fiber

0.7 kg /ADMT fiber